SANTA CRUZ BIOTECHNOLOGY, INC.

Stra8 siRNA (h): sc-89798

BACKGROUND

Human Stra8 (stimulated by retinoic acid gene 8) is a 338 amino acid cytoplasmic protein that shares 55% sequence identity with its mouse counterpart and is activated by retinoic acid (RA). Expressed specifically in testis and in embryonic ovaries, Stra8 is required for premeiotic DNA replication in both male and female germ cells, an event that is necessary for proper transition into meiosis and for subsequent events in meiotic prophase. Spermatocytes that lack Stra8 activity initiate, but fail to complete meiosis, thus resulting in premature chromosome condensation. The gene encoding human Stra8 maps to chromosome 7, which houses over 1,000 genes and comprises nearly 5% of the human genome. Defects in some of the genes localized to chromosome 7 have been linked to osteogenesis imperfecta, Williams-Beuren syndrome, Pendred syndrome, lissencephaly, citrullinemia and Shwachman-Diamond syndrome.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: STRA8 (human) mapping to 7q33.

PRODUCT

Stra8 siRNA (h) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Stra8 shRNA Plasmid (h): sc-89798-SH and Stra8 shRNA (h) Lentiviral Particles: sc-89798-V as alternate gene silencing products.

For independent verification of Stra8 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-89798A, sc-89798B and sc-89798C.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

Stra8 siRNA (h) is recommended for the inhibition of Stra8 expression in human cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

GENE EXPRESSION MONITORING

Stra8 (526CT11.1.5): sc-517364 is recommended as a control antibody for monitoring of Stra8 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Stra8 gene expression knockdown using RT-PCR Primer: Stra8 (h)-PR: sc-89798-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

For research use only, not for use in diagnostic procedures.